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TELECOMMUNICATIONS POLICY,
RESEARCH AND DEVELOPMENT

No. 212

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19 April 1982

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WORLDWIDE AFFAIRS

BRIEFS

RADIO-TV AGREEMENT SIGNED--Moscow, 31 March (TASS)--A first long-term agreement on cooperation between the USSR and Greece in the field of TV and radio broadcasting has been signed in Moscow today. Provision is made for exchanging television and radio programmes on the life of the Soviet and the Greek people, mutual assistance in preparing programmes about the major developments in the USSR and Greece. The document was signed by chairman of the USSR State Committee on Television and Radio Broadcasting Sergey Lyapin and the General Director of the Greek Television and Radio Broadcasting Yeoryios, Romeos. [Text]
[LD312044 Moscow TASS in English 1915 GMT 31 Mar 82]

CSO: 5500/2186

SECOND TELEPHONE EXCHANGE FOR KATHMANDU

Kathmandu THE MOTHERLAND in English 20 Mar 82 p 1

[Text] Minister of State for Communications Fateh Singh Tharu laid the foundation stone for the second telephone exchange building at the precincts of Central Telephone Exchange at local Sundhara yesterday

The building to be equipped with twenty thousand line capacity will be constructed at an estimated cost of 5.35 million rupees.

Equipment of ultra-modern digital exchange system as well as that required for subscribers trunk dialing STC services will also be set up at the new building.

While the building is targetted to be completed by mid April 1983 all equipment will be installed within three years.

STD services will be made available to 34000 customers including 20000 of the Kathmandu valley.

Initially however, semi automatic services will be provided through the building to the customers with the completion of the earth station project, and switch over to direct dialing made later.

In view of the growing demand for telephones in the Kingdom 23750 additional telephones will be installed in the next three years. Of them, 12,000 will be for Kathmandu, Patan and Bhaktapur.

Equipment of half of the ten thousand additional lines to be provided to Kathmandu will be installed at the Naxal telephone exchange building and those for the other half at the second exchange building.

CSO: 5500/5749

WORK TO BEGIN ON EARTH SATELLITE

Kathmandu THE RISING NEPAL in English 26 Mar 82 p 1

[Text]

Kathmandu, March 25:
Installation of the
electric power and commu-
nication equipment at the
Sagarmatha satellite com-
munication earth station of
Balambu will start next month,
it is learnt, reports RSS.

The task of erecting
the main antenna that
directs and receives signals
from the Indian Ocean
satellite will also be carried
out simultaneously.

The antenna, towers,
the electric power and
communication equip-
ment will be flown in here
in two consignments at
the end of March and the
first half of April.

The project being imple-
mented through the joint
cooperation of the His
Majesty's Government of
Nepal and the government
of the United Kingdom is
scheduled for completion
by October 1982.

CSO: 5500/5749

'REUTERS' PLANS FOR HIGH-SPEED COMMUNICATIONS OUTLINED

Christchurch THE PRESS in English 2 Mar 82 p 18

[Text] PA Wellington

A global explosion in methods of communication, giving the ability to transmit words at a rate of five million a minute, was noted by the managing director of Reuters news agency, Mr Glen Renfrew, in an interview with the NZPA.

Mr Renfrew said the speed of improvement in communication methods was emphasised when it was recalled that only 15 years ago transmission by teletype at 100 words a minute was considered "pretty good."

Mr Renfrew was in New Zealand with other Reuters representatives for discussions with executives and directors of the Press Association, which is a shareholder in Reuters, Ltd.

He said Reuters had become a very big business with some 25,000 electronic terminals installed worldwide from which subscribers in banking, commodity dealing, brokerage and industry interrogated its computers to get money rates, commodity quotations, securities prices, business news, and general news.

"This is growing very rapidly."

Reuters had first moved into computer-based news in 1964, and the progress made since had been due to the technological revolution and to international development of the money business.

The agency was now going into the second phase of the technological revolution by moving into very much higher transmission speeds.

This entailed using broadband communications of a type hitherto used for television transmission. This would cope with demand for much faster delivery, enlarged services, and many more customers.

Reuters had a transponder on an American domestic satellite from which it transmitted data, news and information at speeds around five million words a minute.

Mr Renfrew said Reuters wanted to exploit that technology and had now set up a subsidiary company in the United States to develop the systems and the subscriber terminals to work at such high speeds.

A big advantage of satellite use was that once it was in orbit it was so easy to extend services to other countries — "it is not like having to lay cables as we used to have to do in the old days."

He said he and other Reuters representatives had talked to executives in Europe, Hong Kong, Japan, and Australia formally and informally about the need to move into high speed communications.

This method of transmission lowered the unit cost of delivering services. It was very expensive to get into, but once the basic cost had been paid for the trunk communications it was very economical.

The satellite technology had not been used outside the United States but there it had created a much bigger news market.

"The central purpose of Reuters is still to produce international news services of the highest possible standard and we are expanding our reporting network worldwide. We are going to open 12 new bureaux this year and

strengthen quite a lot of others which will be of obvious benefit to our services to press and broadcasting. We could not afford to do it if we had to rely on the revenue we're able to get from press and broadcasting alone."

The new technology could have ready application in New Zealand.

Reuters had developed a cheap interrogation terminal and was developing a cheap facsimile terminal. It was already using a variety of satellite receiver dishes, some at high speed and some at low, and the cheapest was about 609mm across and with associated electronics could be built for about \$500.

"Put a facsimile receiver with it and there is an ideal way of getting instant information to remote areas of North America where farming is big business and there are farmers prepared to pay to receive up-to-the-minute market information," Mr Renfrew said.

"We are sure a similar market exists in most areas where there is a similarly developed agricultural economy."

CSO: 5500/9027

BRIEFS

AGRICULTURAL DATABASE SEMINARS--A series of seminars will be held this month in Wellington and Auckland on the Commonwealth Agricultural Bureaux's (C.A.B.) on-line retrieval service. The C.A.B. provides a range of information services for agricultural science and is controlled by an executive council comprising 26 Commonwealth countries including New Zealand which contribute to C.A.B. funds. The C.A.B. will be represented by Mr Mark Furneaux, training officer. C.A.B. liaison in New Zealand will be carried out through meetings with Dr Graham Butler of the Ministry of Agriculture and Fisheries, Wellington, with assistance from Mr Doug Gibbs, who is responsible for organising the seminars and workshops there. Over a million and a half references to the world's literature on agriculture and related fields of applied biology can be searched with speed and accuracy using on-line database services available from C.A.B. Every year the information is updated with a further 150,000 abstracts. The references are updated on a monthly basis. The system contains all the world's related literature from 1973 and is constantly being added to and expended. The C.A.B. abstracts database is available on-line through various computer facilities including Lockheed Dialog, European Space Agency's I.R.S. and Dimdi. A typical search of all the world's literature for any related agricultural subject takes about 20 minutes. [Text] [Christchurch THE PRESS in English 2 Mar 82 p 23]

COMPUTER SOCIETY MEETING--The first meeting of the New Zealand Computer Society for 1982 was a demonstration of the capabilities of microcomputer systems. On display were five different microcomputers. Mr Derham McAven, from Christchurch Polytechnic, started the meeting by summarising major microcomputer concepts and then invited attendees to inspect the hardware and software on display. A special feature of the demonstration was a communication link between three of the microcomputers using a local area network product. This illustrated the compatibility benefits obtainable when suppliers base their products on the CP/M or MP/M operating systems. [Excerpt] [Christchurch THE PRESS in English 2 Mar 82 p 23]

STATE INSURANCE COMPUTERS--The Datapoint Corporation has installed in Wellington the first computer system in a pilot contract with the State Insurance Office. The State Insurance network will be a distributed network of Datapoint computers communicating with the IBM mainframes at the Government's Cumberland Computer Centre. Datapoint systems installed in branch offices will give State Insurance Office staff access to customer information. The network will operate under the IBM SNA network architecture. [Text] [Christchurch THE PRESS in English 2 Mar 82 p 23]

CSO: 5500/9027

EFFECT OF TELEVISION ON READING CRITICIZED

Lahore THE PAKISTAN TIMES in English 21 Mar 82 p 4

[Text]

A survey by the National Book Council of Pakistan reveals that the reading habit in the country is on the decline. It says that children are no longer attracted by books and even those of the older generation who used to read before going to bed spend their time watching TV. The survey blames the growing appeal of TV for the decreasing public interest in books. The other factor responsible for this is lack of library facilities. There are few well-equipped public libraries, while colleges and schools don't have the funds to provide books to students.

For the people in the book trade and those who still have some lingering interest left in books the finding will not come as a surprise. The rate of sale of books has gone down steeply over the years; there was a survey some time back which showed that Pakistanis spend more money on knick-knacks than on books. An author's is a hard life in Pakistan; one cannot live by writing books. Literary writings particularly are at a low ebb; the demise one

after another of a number of literary magazines is a testimony to this. The vacuum has been filled by the "digests" purveying low grade, escapist literature. A word of praise is necessary here for the few authors who still have the spirit and the stamina to continue to produce quality stuff in these daunting circumstances. TV everywhere has weaned people away from books. Today's kid, whether in the East or West, spends more time before TV than in his classroom. Pakistan is no exception. In our case the low rate of literacy further complicates the situation. About 80 per cent of our people are strangers to the world of books. Those who would like to buy and read books run into the wall of high prices. This has been an important factor in discouraging the reading habit in the country.

But there is more to it than prices and the influence of TV. As the NBCP survey indicates, the increasing aversion to book goes beyond such variable factors and is of a more fundamental nature. It has

its roots in the larger question of society's attitude to intellectual pursuits. People don't read books not because of TV or the lack of library facilities but because the person who reads books commands no respect in society. There has been a change in the value system. The survey makes the alarming finding that the young are guided solely by considerations of material gain, and books don't yield money, at least not in our midst. The ideals and goals have changed. The overriding concern today is to make a quick buck by any means, not to be a useful, productive member of society. The so-called intellectual professions are at a discount. Instead, the striving among most of today's youth is to convert a bright commercial idea into millions overnight. Perhaps this is what has given rise to the "Dubai mentality". In such circumstances, books are apt to lose their value and relevance. But a community is not sustained by entrepreneurs, businessmen and technicians alone. Writers, thinkers and philosophers are equally unnecessary for the balanced growth of civilisation and society. The trend away from books should set us thinking.

INTERNATIONAL GATEWAY EXCHANGE OVERWORKED

Karachi DAWN in English 21 Mar 82 p 9

[Text]

The International Gateway Exchange is handling an average 8,000 overseas calls per month with a total revenue of Rs 17.6 million including a foreign exchange earning of Rs 8 million, Mr. A. R. Qureshi, General Manager, Overseas Telecommunication Region Karachi, told a press conference on Saturday.

To reduce the pressure at the Exchange, he asked the telephone subscribers to convert their telephones to the International Subscribers Dialling system (ISD) at a nominal fee of Rs. 50. This will enable them to dial directly to 14 countries. And for the rest, the calls will have to go through the Exchange (N. 0302).

The 25,000 lines capacity ISD system is presently is under-utilised - according to the General Manager 90 per cent of the capacity is lying idle.

He said ISD would be linked to the United States within the next two to three months after an agreement is reached.

He further disclosed that after the expansion of the satellite earth station this month about 48 more circuits will be established with Saudi Arabia, UAE, United States and the UK.

The Gateway Exchange is connected through ISD with 14 countries on direct circuits, viz. Bahrain, France, Italy, Iran, Ireland, Japan, Kuwait, UK, Oman, Switzerland, Singapore, Saudi Arabia, the UAE, and West Germany.

An order has been placed with the manufacturers to increase the exchanges hooking domestic and national circuits facilities. This work will be completed by next year. Plans for its expansion are also under the consideration of the Government, he said.

CSO: 5500/5744

BRIEFS

TELEPHONE CONNECTIONS--The number of working telephone connections throughout the country is about 350,000 at the moment. This was disclosed by Mr. A. R. Qureshi, General Manager of the Overseas Telecommunication region, Telegraph and Telephone Department, here yesterday. He said of these telephone connections about 270,000 were of the automatic type (i.e., the instruments had dials and the subscriber could ring up any number he wanted). The remaining 80,000-odd instruments did not have dials, and the subscribers concerned had to ask the operator to connect them to the desired number. Mr. Qureshi said that the 350,000 existing telephone connections worked out to a per capita number of four or five instruments per 1,000 of the national population.--AFP [Text] [Karachi MORNING NEWS in English 21 Mar 82 p 5]

SUPARCO CHAIRMAN TO NEW YORK--Mr Salim Mehmud, Chairman Pakistan Space and Upper Atmosphere Research Commission, left here yesterday for New York to represent Pakistan at the 25th session of the UN Committee on the Peaceful Uses of Outer Space being held in New York from tomorrow to April 2. The membership of this committee totals to 53 including Pakistan. The committee reports to the General Assembly and is assisted in its work by two sub-committees named as Scientific and Technical Sub-Committee and the Legal Sub-Committee. The committee deals with space science and technology matters at the UN level. Some of the items on the agenda of the committee deal with formulation of principles for regulating the remote sensing activities of nations operation of direct broadcasting satellites, use of nuclear power source in space, definition of limits of outer space and its linkage with geostationary orbit and other activities of nations in space. The committee is also acting as advisory body for UNISPACE 82 conference which will be held in Vienna in August to highlight the peaceful uses and applications of space said a Press release yesterday. [Text] [Karachi MORNING NEWS in English 21 Mar 82 p 5]

CSO: 5500/5744

SOVIET-BUILT LAOS SATELLITE STATION TRANSMISSION TO THAILAND

BK190453 Bangkok NATION REVIEW in English 19 Mar 82 p 1

[Article by Chumsin Plianla-o]

[Excerpts] The Soviet Union has constructed a satellite station in Laos that will, among other things, enable Moscow to relay to Vientiane television programmes which may be received by certain Thai northeastern provinces, a senior Bangkok-based Laotian diplomat told THE NATION yesterday.

The diplomat said the "inter-Sputnik satellite station" was officially handed over to Laos late last month. The communications system also links direct long-distance phone and telex service between the two nations.

"The Laotian people can now receive Russian TV programmes on two channels through the satellite," said the official, who asked to remain anonymous.

He said the Russians began construction of the satellite station on September 1980 and completed it on February 19.

The official of the Laotian Embassy in Bangkok said the satellite station was part of the Soviet assistance to Laos under an agreement concluded on October 5, 1978.

Describing it as "a gift" from the Soviet Union, he said he had no idea how much the construction of the station cost.

He added that the satellite station comprises two units--a ground station on the outskirts of Vientiane and a relay station within the capital.

"The scanner disc is 12 metres in diameter and the scanner post is about 108 metres high," he said of the size of the ground station.

The official said Laotian people have been watching TV programmes transmitted from across the Mekong River on Channel 5 and Channel 7 of Thailand.

"We have no policy to prohibit Laotian people from watching Thai TV programmes," he added.

Informed sources view the presence of the satellite station as an attempt by the Soviet Union to have direct contacts with Laos without having to go through Vietnam.

"Moscow and Vientiane can now make direct communications," one of the sources said.

However, a senior Thai official who claimed to have been watching the development of the construction of the satellite said that it had not yet begun functioning.

THE NATION contacted local authorities in four northeastern provinces, Nong Khai, Loei, Nakhon Phanom and Ubon Ratchathani, which border Laos yesterday and were told no TV programmes from Laos had been received so far.

However, a technician in Loei said with proper antenna it was possible that Thai viewers there can receive programmes from Laos.

CSO: 5500/5748

THAILAND

BRIEFS

NEW RADIO TRANSMITTER--On 25 March Prime Minister's Office Minister Chan Hanutham inspected the site of new 1,000-kilowatt transmitter of radio Thailand located in Nong Khae District, Saraburi Province, which is a boast of the old 100-kilowatt transmitter. Construction of the station which started in September 1979 was completed in September last year, and the station has been operating satisfactorily on an experimental basis. The radio transmitter power can cover almost all areas of the country during daytime and all areas of the country as well as neighboring countries during night time. The station, located on a 300-rai plot of land will use electricity supplied by the provincial electricity authority of Thailand at a cost of 2 million baht per month. Official broadcasting of the radio station is scheduled on 3 May. [BK311249 Bangkok Domestic Service in Thai 1300 GMT 25 Mar 82]

SATELLITE STATIONS PLANNED--Governor Chao Thongma of the Communications Authority of Thailand said that the authority has a plan to set up a network of 14 satellite signal receiving stations in provinces throughout the country with the main station being located in Si Racha District, Chon Buri Province. When the plan is completed, people throughout the country will be able to simultaneously receive television programs relayed from Bangkok. It will also facilitate the long-distance telephone, telegraph and telex services as well as will make possible in future the international automatic long-distance telephone service. [BK311249 Bangkok Domestic Service in Thai 0000 GMT 29 Mar 82]

CSO: 5500/2186

BRIEFS

SATELLITE GROUND STATION INAUGURATED--Kuwait, Feb. 27--Kuwait today inaugurated its third satellite ground station, an official press release by the Ministry of Communications said. Like its two predecessors, the new 'Earth Station' is located in Umm Al Aish, close to the border with Iraq. Minister of Communications Essa Muhammad Al Mazidi personally declared the station operational today in the presence of Undersecretary Abdul Rahman Al Ghuneim and other senior officials. The new ground communications system is designed to cope with increasing demands on international communications between Kuwait and rest of the world, it is being stressed. All the ground stations are linked to 9 network of satellites operated by Intelasat (International Telecommunications Satellite Organization) founded in 1964. Kuwait had joined that organization in 1966. The third station has been designed and built by Nippon Electric of Japan at a cost of KD 2.7 million. Its initial capacity is 324 channels and its antenna is pointed to the Indian Ocean Region satellite serving the countries of the region. Ground stations dotted around the world serve as reflectors communicating signals of information to the orbiting satellites. Telephone calls, Radio and TV broadcasts and other information can be conveyed by the satellite network. From the satellite, any information can again be re-transmitted to the ground stations. [Text] [Kuwait ARAB TIMES in English 28 Feb 82 p 1]

CSO: 5500/4714

CHAD

BRIEFS

FRENCH AID--Ndamena, 2 Apr (AFP)--A loan agreement worth 150 million CFA francs for the renovation of Chadian National Broadcasting (RNT) was signed Wednesday by French ambassador to Chad Claude Soubeste and Chadian Minister of Foreign Affairs Ahamat Acyl. The loan will be used to procure broadcasting equipment and improve the listening quality of the station through the reconstruction of transmitters. Under the terms of the agreement, Radio Chad will be equipped with three vehicles for field reporting. The RNT suffered serious damage during the fighting in Ndamena. It was repaired recently by French technicians. [Text] [AB021135 Paris AFP in French 0938 GMT 2 Apr 82]

CSO: 5500/5743

BRIEFS

AUTOMATIC TELEPHONE LINK—The automatic telephone link between Senegal and Tunisia will be inaugurated on Monday, 5 April, with a telephone conversation between President Abdou Diouf and his Tunisian counterpart. [AB040628 Dakar Domestic Service in French 2000 GMT 2 Apr 82 /B]

CSO: 5500/5743

SOUTH AFRICA

BRIEFS

SWAZI RADIO SERVICE--The eight service by the South African Broadcasting Corporation for black listeners, known as Radio Swazi, begins broadcasting from Pretoria this evening. Radio Swazi will be broadcasting to about three quarters of a million Swazi listeners. [Text] [LD011740 Johannesburg International Service in English 1500 GMT 1 Apr 82]

CSO: 5500/5745

COMPUTER SOCIETY ASKED TO HELP PTC SOLVE PROBLEMS AT LUSAKA EXCHANGE

Lusaka TIMES OF ZAMBIA in English 22 Mar 82 p 7

[Text]

ZIMCO director-general Mr James Mapoma has appealed to the Computer Society of Zambia to help the Posts and Telecommunications Corporation (PTC) in solving problems at its main exchange in Lusaka.

Addressing the society's annual general meeting at the Zambia Railways training centre in Kabwe at the weekend, Mr Mapoma wondered why the new exchange fitted with latest machinery caused congestions in telephone communication.

The society had a "tremendous" role to play in the propagation of the use of computers "and I do hope that in doing so, you will be able to guide us to achieve the best and most useful results from the use of computers".

"In the minds of many, computers are complex animals and I feel that your society can play an important part in explaining — in lucid terms — to the layman that the computer animal — though complex — is a very useful one capable of performing simple wonders."

In assessing the country's needs and the extent to which her people used sophisticated tools and latest technology it was necessary to consider the

overall economic and sociological effects like manpower utilisation and the cost of implementation.

"In a developing country like ours, resource allocation to meet different and often conflicting demands is difficult. "It is necessary always, therefore, to ensure that available resources are utilised and available facilities exploited to the maximum before additional resources are committed in the same area."

Mr Mapoma reminded the society that computers — whether for data processing or process control in industry — were extensively used in Zambia by the Government, industry and trade as well as parastatal organisations.

Zimco with its subsidiaries and associate companies was "heavily committed" to the use of computers for data processing. In the mining industry, computer-based systems were used extensively.

"Zambia Railways have their installation here in Kabwe and I understand they are presently shopping for a better machine to handle the growing needs for information processing."

BRIEFS

TELEDATA TESTS BEGINNING--Yesterday Denmark took a cautious step forward into the world of telecommunications when the Postal and Telegraph Service in cooperation with the telephone companies KTAS [Copenhagen Telephone Company], the Funen municipal telephone company and Jutland Telephone, began a 2-year trial period of teledata. Telecommunications director Ib Lonberg made the first call, the buttons worked and the first data pictures flashed on the screen. The 200 to 300 subscribers to the project can draw on about 50 information sources, including the state and the daily press, via the scanner. Division chief Helge Mansa of KTAS talked about the construction of the project. He stressed that Danish experience had been gained already since Bang & Olov, Struer, had supplied the first 200 Danish receivers and the firm of Chr. Rovsing had developed the computers while the firm of Lars Valentin, Stenlose, produced the 250 very special keyboards for the trial. Further developments were made on the basis of experiences abroad so that technically the Danish system is more advanced than systems currently in use in England and Germany. Division engineer Jorgen Mehl of Jutland Telephone talked at the opening ceremonies of their hopes for the trial period. He demonstrated how users can send tele-mail to each other. [Text] [Copenhagen BERLINGSKE TIDENDE in Danish 31 Mar 82 p 5] 6578

CSO: 5500/2180

STUDY GROUP URGES GREATER STATE ROLE IN TELECOMMUNICATIONS

Helsinki UUSI SUOMI in Finnish 9 Mar 82 pp 6-7

[Article: "Study Group Would Give Telecommunications to State"]

[Text] Telecommunications should be concentrated in the hands of the state, proposes the telecommunications study group, which presented its report to Communications Minister Jarmo Wahlstrom (Communist) on Monday.

The League of Telephone Companies stated in a dissenting opinion that this is a question of an aspiration to establish a monopoly by which the position of the Postal and Telecommunications Service will be strengthened at the expense of private telephone companies.

In the opinion of the majority in the study group the state would be principally responsible for the management and development of telecommunications activities. Others would be able to pursue such activities only with the permission of the Ministry of Communications.

The study group, which was recently established by Communications Minister Veikko Saarto (Communist), was directed by Valto S. Rauvanto.

At this time telecommunications includes data transfer, telefax, and telset, among other things, in addition to telephone and telegraph communications.

Interpretation Controversy Over Application

The diversification of communication has resulted in differences of opinion regarding the application of laws. The study group unanimously considers that a clarification of the situation will require total legislative reform.

However, this unanimity did not go beyond this. Differences of opinion began already with the principles of a new law.

Precisely Limited Permits

In the proposal concerning the division of work the majority in the study group proceeds from the fact that the Postal and Telecommunications Service would handle foreign communications, communications between network groups, telegraph and telex

communications, local communications in their own area of operations as well as communications occurring in the special networks of the state.

The responsibility of the licensing establishment would be to manage all telecommunications occurring in the telephone network. As need would dictate the Postal and Telecommunications Service would, however, take care of the telecommunications services required by state offices, institutions, and enterprises. The Postal Service would also be given data transfer services when the customer wants a total data transfer service that goes beyond the limits of the area defined by the operating license.

The detailed division of operations would be defined by strictly delimiting the activities of individuals possessing a permit.

Opposed to Nationalization

Section Chief Reijo Svensson of the League of Telephone Companies states in a dissenting opinion that this report does not correspond with the requirements established in the legislative bill. He considers that the whole premise of this work has only been to strengthen the position of the Postal and Telecommunications Service at the expense of private telephone companies.

According to Svensson aspirations to establish a monopoly are also apparent in the fact that an attempt is now being made to tighten the long-distance communications monopoly by the strength of the law.

Office Chief Kauko Pursiainen of the Finance Ministry emphasizes in a dissenting opinion that a tighter concentration of this business in the hands of the Postal Service does not comprise a suitable basis, for example, for solving the telecommunications conflict. He considers that concentrating data transfer services primarily into the hands of the Postal Service does not always correspond with the interests of the user.

Pursiainen considers that the proposal of the study group places too much emphasis on the interests of the parties pursuing telecommunications activities, which are not always to the benefit of the consumer.

More Power to the State

Representatives of the Postal and Telecommunications Service, graduate engineer Aulis Salin as well as General Manager Pekka Luukkainen consider in a joint opinion that the proposal of the study group favors private telephone companies. They consider that the management of new telecommunications services should not be given to private companies even in a limited form.

Salin and Luukkainen also do not approve of the fact that the Ministry of Communications would become the party responsible for issuing licenses instead of the Postal Service. They also propose a statute by which general information services would be made subject to licensing.

Telephone Companies Want a Committee

Managing Director Arno Tanhuanpaa of the League of Telephone Companies is analyzing the study group's report. In a stand concerning this issue he considers that the work of the study group is not impartial. According to Tanhuanpaa this is partially the result of the make-up of the study group. Five officials represented the state's telecommunications activities, one the Finance Ministry. The only member outside of state administration was from the League of Telephone Companies.

Tanhuanpaa emphasizes that the principle of free enterprise should be carried out in our country's telecommunications system. He considers that legislative reform requires an impartial and broadly based committee. The users of telecommunications should also be represented in the committee.

Assistant Director Paavo S. Vepsa of the Central Chamber of Commerce considers that the proposal of the study group threatens to freeze technical development in this whole area. According to him there is no reason to commence legislative actions on the basis of this report.

Vepsa strongly disapproves of the overall prohibitive mentality of the law proposal: what is not particularly defined as permissible is prohibited. According to Vepsa the principle of permissibility should, on the contrary, unconditionally prevail for the benefit of the consumer.

Vepsa hopes that the whole telecommunications law will be reconsidered in a parliamentary committee in which business interests representing the consumer will also be included.

10576

CSU: 5500/2164

ESA SEEKS LONG-RANGE PLANS FOR LAUNCHERS, SATELLITES

Paris AVIATION MAGAZINE INTERNATIONAL in French 1-14 Mar 82 pp 24-25, 27, 29

[Article by Patrice Prevot: "European Launchers: From One Stage to Another"]

[Excerpts] In late January, the European Space Agency (ESA) officially approved development of the Ariane 4 launch vehicle. This improved follow-on version of the Ariane will chiefly enable Europeans to increase their competitiveness in the space launch services market during the period 1986-1995. But the Old Continent is also already studying concepts for a launch system to succeed Ariane 4. This is a "tall order," however, in that it involves defining a new launcher without having complete knowledge of its future missions. A vast undertaking.

France made its go-ahead decision on Ariane 4 back on 15 October 1981. Since then, ESA member nations* have made formal commitments to participate in this program at an estimated cost of 1.5 billion francs, including a 20 percent margin for technical contingencies.

This program is a new important stage for Europeans because Ariane 4 is not only meant to extend Europe's independence in the space launcher field but also very sharply increase its competitiveness in the market for space transportation systems during the period 1986-1995, not to mention the fact that it will also ensure continued work beyond 1985 for those manufacturers who have a large stake in this program.

In Arianespace, the organization responsible for marketing Ariane launches, officials estimate Ariane 4 can potentially capture 70 percent of the total Free World satellite-launching market from 1985 to 1991. In other words, this could mean launching 178 satellites of that period's estimated international market of 258 units, exclusive of American military satellites and launches in the USSR and other communist countries. These sales prospects are based on improvements in the Ariane family which are expected to reduce launch costs and produce a more flexible launch vehicle capable of greater adaptability to user requirements.

* Germany, Belgium, Denmark, Spain, France, Italy, Netherlands, United Kingdom, Sweden, and Switzerland.

A 'Spark Plug'

But Europeans could not shilly-shally any longer in approving development of Ariane 4. It will be recalled that, despite the reluctance of some countries in the Ariane program, the decision to initiate developments of versions 2 and 3 were made before 25 December 1979, the date of the launcher's first qualification test firing.

A decision in which France--with its reported 54 percent share of Ariane 4's financing--again served, through its CNES [National Center for Space Studies], as the spark plug with respect to its European partners, a role which it definitely intends to continue to play. As explained by Yves Sillard, CNES chairman and managing director: "If the December 1979 decision had not been made when it was, we would not have been able to keep pace with the competition and meet current market needs. Indeed the fact is that Ariane 2 and 3 are, at the present time, Europe's war horses in the international spacecraft launcher market."

It was definitely in this spirit that France pushed for approval of Ariane 4 so as to have the capability, by 1986, of placing a maximum 4.3-ton payload in geosynchronous transfer orbit. One of the objectives sought through this program is to retain Europe's competitiveness in the geosynchronous orbit market. In this field, Europe has benefited from the fact that the Americans--too engrossed by development and testing of their space shuttle--did not proceed to improve their conventional launch vehicles.

What Future Missions?

Beyond development and production of the Ariane 4 launcher, Europeans are already discussing the possible design of a follow-on space transportation system, because space officials concur in estimating Ariane 4's service life to be approximately 10 years.*

The difficulty lies in defining a new launch vehicle without full knowledge of the missions for which it will be employed. In fact, through this future launcher, Europeans will have to accomplish two objectives: increase their competitiveness to a more pronounced extent than with Ariane 4, and extend this competitiveness to applications in low earth orbit.

Up to now, Europeans have, of course, sought to optimize launch systems for geosynchronous missions (communications satellites, direct TV broadcast satellites, etc.). But one must admit that present geosynchronous orbit (36,000 kilometers) capacities are clearly below expressed needs. In other words, there are still prospects of a considerable market for such launch services.

* CNES sponsored a most interesting symposium in January. It provided a forum for discussions on the evolution of Europe's launch systems.

Nevertheless, competitiveness will have to be extended to launchings into low orbit (200 kilometers). According to a good number of forecasts, this area of space activity could give rise to many new applications. In fact, such applications are being spurred by the American space shuttle and its new associated techniques: multiple launches, rendezvous, human intervention, etc.

It is, therefore, from such low orbit activities and through major developments in robotics and remote manipulators that space operations will be able to expand in several fields, including geosynchronous launchings, and all of this under more flexible and more economical conditions.

These trends are prompting space engineers to design future generation launch vehicles no longer as mission-optimized systems but as systems meant to attain a low orbit where the mission responsibility will then be assumed by another space system. One major question remains, however: what will man's role in space be?

Three Families

Yet on the Old Continent there is seemingly no resolve to adopt the concept of a manned shuttle to meet the needs of the period 1995-2010 (this is actually the period when the future European launch vehicle is to be used). The reason? It is felt on this side of the Atlantic that while the American shuttle is technically an altogether remarkable system that unquestionably opens the way to future developments in space activity, its concept which leads to using a manned vehicle to place automatic satellites in orbit is, however, still not truly optimized.

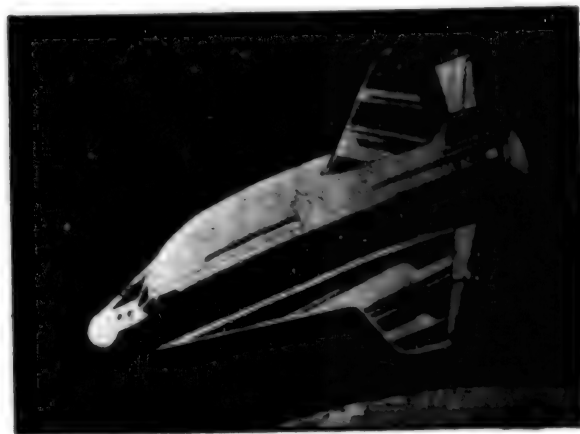
For this reason it is still necessary to examine several concepts having different degrees of recovery and partial or total reusability of the different stages. The concepts under study include the following three families: non-reusable conventional ballistic launch vehicles (Ariane 5 project being studied by Aerospatiale under a CNES contract); reusable ballistic launch vehicles (MBB [Messerschmitt-Boelkow-Blohm] is studying such systems for ESA); and recoverable aeroballistic launch vehicles (Aerospatiale is studying this family for ESA).

These three families of two-stage launchers have one thing in common: they all require a high thrust cryogenic motor. Volvo, MBB, and SEP [European Propulsion Company] are jointly studying development of a high thrust (90-100 tons) cryogenic stage designated project HM-60. But engine manufacturers are already pointing out that technological studies must begin right now if the stage is to be available by 1994. Its estimated development costs total 4 billion francs spread over a period of 10 years.

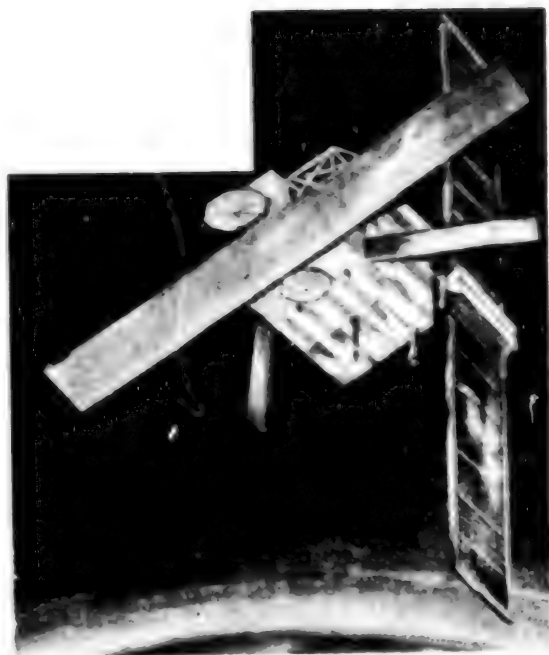
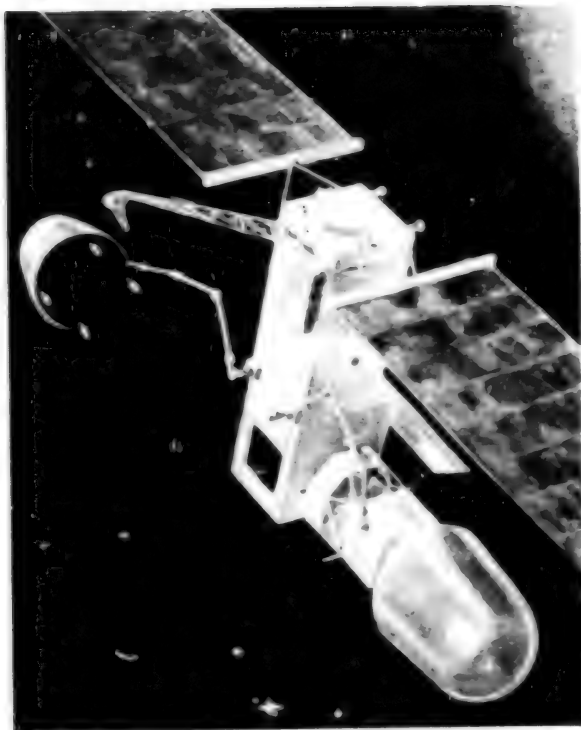
This future launch vehicle is expected to have the following principal characteristics: the same capacity (4-5 tons) of carrying payloads into geosynchronous orbit as the U.S. space shuttle, and at a lower cost; the capability of placing suitable payloads (13-15 tons) in low earth orbit; and sufficient reliability to carry manned vehicles.

But Europeans have not yet reached that point. They will be able to make headway in defining this new space transportation system and in deciding whether to develop it only after they have the data and findings from more exhaustive studies of the different concepts under consideration. The goal is to make a firm decision on this matter by 1984-1985 so as to have an operational launcher by 1993-1994.

Europeans must of necessity do their utmost in striving to adhere to this timetable. Because in addition to retaining their actual independence with respect to launch services, the stakes involved include all of the commercial "fallout" that will occur from future space applications, starting with those which exploitation of the space shuttle will generate between now and then.



Artist's conception of the Hermes manned vehicle, a project being studied by CNES for possible future use in conducting different missions in low earth orbit.



Artist's conception of the Solaris earth-orbiting space station system also being studied by CNES. This space station concept is expected to demonstrate that by using unmanned spacecraft and an Ariane 4 type of conventional nonrecoverable launcher, it is possible to conduct ambitious and industrial orbital operations such as materials processing, earth observation, and assembly of large orbital structures.

Artist's conception of another ESA project, the first European observation satellite, ERS-1 (Earth Resources Satellite). Its primary mission: monitoring oceans and glacial areas. ESA had planned to make a decision on this program in February. Estimated cost of this satellite, whose launch is targeted for mid-1987, is 2.7 billion francs. ERS-1 will be equipped with optical and ultrahigh-frequency instrumentation giving it an all-weather capability. ESA was also expected to make a decision in February on the improved version of Spacelab that could fly in 1986. The first version of Spacelab is scheduled to fly in 1983.

8041

CSO: 5500/2161

RESEARCH CENTER DEVELOPS TERMINAL INTEGRATION SYSTEM

Paris REVUE FRANCAISE DES TELECOMMUNICATIONS in French Jan 82 pp 59-61

[Article by Michel Jarlaud and Eliane Monmaur: "COMCET--Toward Electronic Mail Service"]

[Excerpts] The union of data processing with telecommunications has given rise to new systems and services like teletex, videotex, telefacsimile, electronic mail. The incompatibility of terminals with each other hinders message routing. In order to solve this problem, the National Center for Telecommunications Research has developed a mockup of a message switchboard for electronic mail and telefacsimile (COMCET).

A New Terminal

Before ending up with the design of a mockup of a message switchboard for electronic mail and telefacsimile, called COMCET, it was essential to establish a concept of message service and the quality needed by that service. In a second stage, it was necessary to determine the transmission networks capable of being used and the desirable "interoperations." Next, it was necessary to select terminals suitable for the service, to define the techniques brought into play and to establish the specifications. Finally, a minimum of experimentation should be performed, in order to be able to validate the various technical options on the one hand and to study the structural and human impacts of this new service on the other hand.

At the present time, there is a great diversity of terminals that can have access to electronic mail. Their different access capabilities must be taken into account.

In fact, depending on the equipment, transmission is more or less fast. Telex terminals operate at 50 bauds. Text-processing terminals connected in asynchronous mode and traditional alphanumeric terminals of the teletypewriter type and display consoles usually have speeds ranging from 300 to 1,200 bits a second; in synchronous mode, speeds from 1,200 to 4,800 bits a second (2,400 for the teletex terminal). Telefacsimile terminals handle 3 to 4,800 bits a second. The TGD [expansion unknown] handles 2,400 bits a second.

Therefore, the role of the switchboard is to ensure interoperation between all those terminals and to perform code conversions and adaptations to the editing features of the receiver. In addition, it must make access to the electronic mail service possible by means of the various networks, in order for its development to be important. From this point of view, it must, therefore, be able to connect the existing networks like telex, switched telephone and Transpac by offering conversions of transmission procedures and speed adaptation.

The message terminal for electronic mail and telefacsimile proposes three kinds of service: distribution services, services offered on arrival and electronic message bank services.

Distribution Service

The distribution service will offer users the function of distribution of one or more messages to one or more addressees (figure 1). The subscriber furnishes a list of correspondents and a series of messages addressed to all these correspondents. This service will be characterized by the quality of service offered at the degree of speed of execution--urgent, routine, deferred, night--and distribution reliability.

The subscriber can ask the service to verify in real time the existence of his correspondents as subscribers to electronic mail. If this is not the case, he is notified immediately and he can then modify the list of correspondents. If he has not requested verification, only the consistency of the numbers is checked.

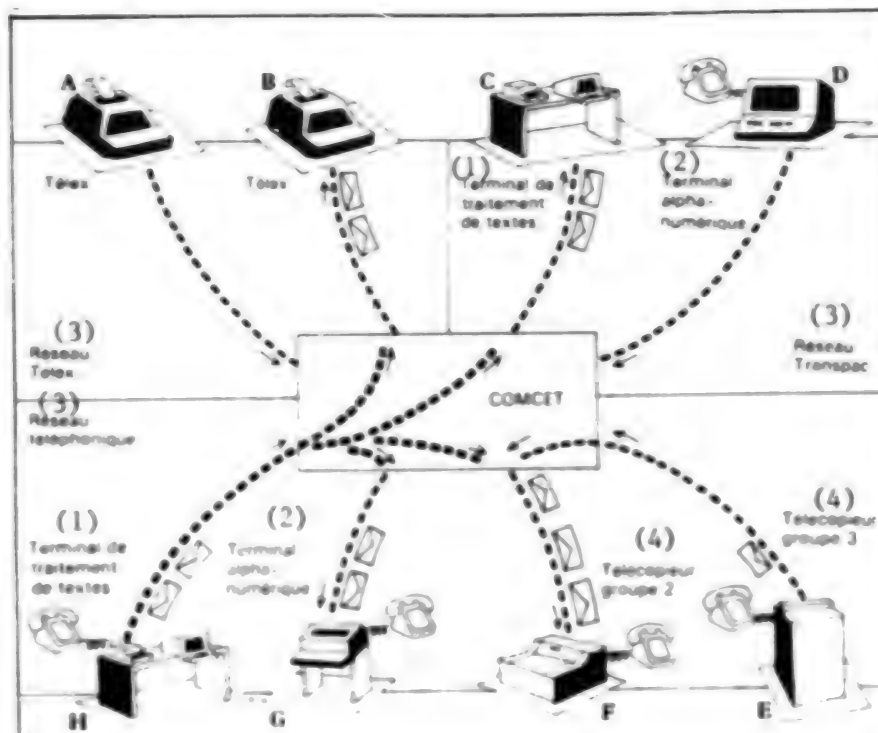
With the verification option, the service will distribute the messages regardless, even by mail if the connection has become impossible. With this option, it may happen that some numbers, although consistent, are not for a subscriber to the transmission network involved or not having electronic mail equipment. In this case, the sender will not be informed of the loss of the message, unless he has requested a reception receipt. For each message he will then be sent a receipt showing the time of delivery to each correspondent or a notation of abandonment of distribution for a correspondent.

In addition, facilities are proposed to the sending user who is assisted in addressing the recipients. The switchboard handles ~~prerecorded~~ distribution lists peculiar to the user.

The services offered on arrival will facilitate "users" arrival" mail handling (figure 2). A subscriber can request filing of his "arrived" mail. Any message addressed to him is then delivered normally and is also stored. This service will make it possible to obtain another example of the document at any time, either for mere duplication, or if the original has been destroyed owing to bad handling by the recipient.

A user can state that he will be absent up to certain date. Mail addressed to him is, at his choice, either sent to another user, or filed, or forwarded by the postal services, or abandoned.

For these services, the filing function is associated with the notion of message boxes managed by the service and exclusive for the user.



Distribution service: The distribution service handles forwarding of one or more messages to one or more subscribers. The quality of the service is determined by the sender who selects the forwarding speed (urgent, routine, deferred), reliability of forwarding (reception receipt, verification of the existence of the recipients). Addressing facilities are offered in the form of predetermined lists.

Two distribution examples are given here: distribution of two messages from subscriber H to subscribers B, C, F, G and distribution of a message from subscriber E to subscriber F.

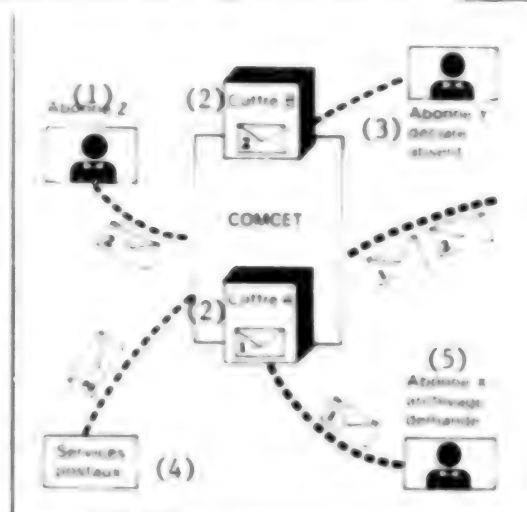
Key:

1. text processing terminal
2. alphanumeric terminal
3. telex, Transpac, telephone network
4. telefacsimile group 2, 3

Electronic Message Bank Service

This electronic message bank will offer personal letter box services, data exchange, general data and teleconference. Thus, any user will be able to deposit messages in a box, but only its owner will be able to consult them and destroy them. In case of exchange, each subscriber will have the capability of depositing and consulting the messages that the box contains. With regard to general data, anyone will examine that those data, but only a subscriber can deposit and eliminate information. This service will make it

possible, for example, to handle service memoranda, yearbooks, test patterns for terminals. Finally, by means of teleconference, a group of users will exchange messages in deferred time on a given subject. Only the members of the group can participate in a specific teleconference, because deposit and consultation of the pertinent messages is protected.



Services offered on arrival: Filing and absent subscriber. In the first case, subscriber X requests COMCET to file his mail on receipt. The message addressed to him (message 1) is distributed normally and is also stored in the box of his choice (Box A here).

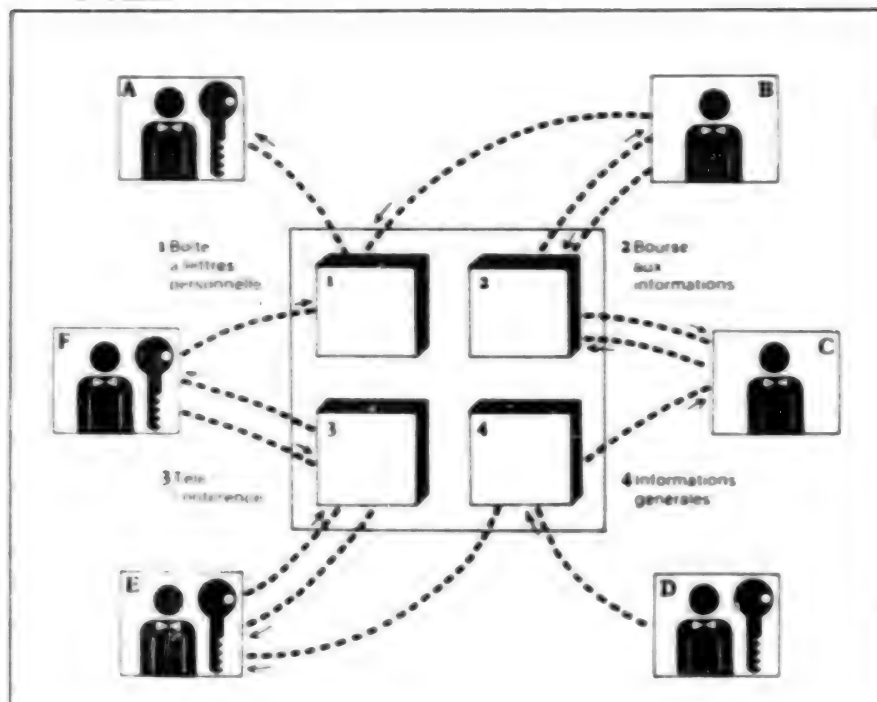
In the second case, subscriber Y states that he will be absent up to a certain date and orders that any message addressed to him (message 2) be stored in the box of his choice (Box B). He might have requested that this message be sent to subscriber Z, or forwarded by the postal services.

Key:

1. subscriber Z
2. Box B. Box A
3. subscriber Y states his absence
4. postal services
5. subscriber X requests filing

This electronic message bank, therefore, consists of boxes to which the users will have access (figure 3). Subscribers will have the right to own one or more.

A message addressed to a box will include, in addition to its heading, a title and a validity date. The title is supplied by the sender and is limited in number of characters. It appears in the dictionary of the box and makes it possible to seek out the message. The duration of validity, initiated by the sender, can be modified subsequently. On expiration of that time period, the message will be destroyed by the service. When a message is inserted in a box, the service will assign it a number that makes it possible to index it.



Electronic message bank service: Personal letter boxes, teleconference, data exchange, general data.

Subscriber A has one (or more) personal boxes. He alone can consult the messages deposited by any subscriber. Any subscriber can deposit messages in "data exchange" box, or can consult them (small notices).

A "teleconference" box is accessible to any subscriber on the list associated with that box (here, subscribers E and F) for depositing and consulting messages.

Subscriber D handles a "general data" box. He alone can deposit messages in it that can be consulted by any subscriber (service memoranda, yearbooks).

Key: 1. personal letter box
2. data exchange
3. teleconference
4. general data

Several kinds of operations are possible in a box. The operation of deposit enabling the user to insert one or more messages; the dictionary consultation operation in which the list of messages referred to by a number is obtained; the operation of requesting a message: it is possible to obtain either all the messages contained in the box, or one particular message selected by its number. Finally, an operation of validation consisting in modifying the duration of validation of a message.

An access key goes with each kind of operation determining the degree of confidentiality of the messages. Three kinds of access are possible: pooled, any subscriber can perform the operation involved on this box; selective, the operation is authorized only for a certain number of subscribers whose list is associated with the box; access by password.

All the operations and their access keys make it possible to set up flexible, varied data systems, without, however, reaching the complexity of a data bank.

Access to the Service

After establishment of communication with the electronic mail service (specific establishment to the network used), the procedures for service selection, for deposit of messages, for addressing the recipients and for access to the boxes are performed in accordance with two operating modes.

In the dialogue mode (and in real time), the subscriber is guided during performance of the service by questions that he must answer, in order to introduce the service parameters, within a period of several minutes. If the answers are incorrect, the service asks the questions again, or asks for corrections. The subscriber can cancel his answer or request repetition of the previous question.

In automatic mode, all the communication parameters are sent by the subscriber at one time. This mode of operation is especially convenient in case of the distribution service requiring no answer by the electronic mail service.

In the case of services requiring an answer (consultation of a box, for example), the answer will be deferred. The subscriber will be recalled as soon as the service is able to provide him with the requested data.

Any message distributed is authenticated by a heading generated by the service, consisting of origin, addressee, time of filing and time of transmission.

The services described above exclude direct communications between subscribers. The asynchronism existing between the functions of filing and transmission (or consultation) of messages requires them to be stored. Only the method of message switching, which disassociates these operations, makes it possible to perform the desired functions.

The COMCET electronic mail service, therefore, uses this method. A multi-switching structure, with the terminals connected to each other by high-rate connections through the Transpac network, might make it possible to ensure good coverage of the territory by dividing up the traffic and by offering a high degree of reliability.

Because messages are recorded before being delivered, it is possible to receive them and then to transmit them with procedures for transportation, speeds, period, presentation and different codes.

This makes it possible to provide maximum compatibility between the various kinds of terminals and interoperation between the various transmission networks.

Switching, Performance of the System

In order to become familiar with the capabilities of the COMCET system, a simulation has been produced in accordance with several assumptions.

First of all, it was essential to achieve a good quality for the service, that is to say a low rate of rejection of calls, a short delay between filing and transmission of the message. For example, it was desirable for a message transmitted in the morning to be distributed before 1400 hours. An overall acceptable result is an 80-percent distribution of messages performed in less than 2 hours.

Next, the entering traffic was divided into two periods (0800 hours 1200 hours and 1400 hours 1800 hours) with two peaks at 1030 hours and 1530 hours, and, depending on the terminals, 30 percent for 50 to 300 bits a second, 60 percent for 1,200 bits a second, 10 percent for telefacsimile. Because the rule on distribution of outgoing calls is the same as for entering calls, the size of the messages was modulated in accordance with the transmitter: telex, 250 to 750 characters; telephone terminal, 1,000 to 2,000 characters; telefacsimile, 20,000 to 40,000 characters. Finally, the average distribution rate was 5.6 [percent] and the average terminal no answer or busy was estimated at 10 percent.

The results of this simulation were very acceptable. In fact, with 5,000 messages a day entering, therefore 28,000 outgoing, and a maximum configuration of the computer, no call was refused, the system did not rest between 1300 hours and 1400 hours and 90 percent of the messages waiting less than 2 hours.

The message switchboard for electronic mail and telefacsimile is included in the framework of the new communication services to be offered to enterprises. It is one of the first steps toward an integrated system of document communication.

Progress in this direction requires a continuation of the efforts made with regard to standardizing the services within international agencies (CCITT [International Telegraph and Telephone Consultative Committee (of ITU)], CEPT [European Conference on Postal and Telecommunications Administration], ISO [International Standardization Organization]). In this context, the COMCET mockup was an ideal test bench for the French telecommunications administration, in order to contribute to the specification of services, procedures and validation of technical options. The success of this project was made concrete by demonstration, especially at the time of the last AFCET-SICOB [expansion unknown] bureaucratic exhibition and it made it possible to ascertain the feasibility of this application.

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CSO: 5500/2144

GOVERNMENT NOTE ON SATELLITE, SPACE ACTIVITIES

Amsterdam ELSEVIERS WEEKBLAD in Dutch 13 Mar 82 p 11

[Article by Fred Kappetijn]

[Text] One of these days, after 5 years, the note on satellite and space activities will finally appear. The essence of the note is that the Netherlands, in the area of satellite and space activities, will have to keep a somewhat lower profile. For the time being, no new national (scientific) satellite, though somewhat more activity in the European context. According to the government, industry has nobody but itself to blame for the fact that the Netherlands will not develop into a leading satellite and space activities nation.

In 1977, the government promised our representatives in Parliament that it would prepare a note on satellite and space activities. Twelve months ago, the content of that note was almost ready, with the exception of a few points of detail. One point of detail was: Who must provide how much money for the implementation of the proposed satellite and space activities program. After some bickering, the Ministers of Economic Affairs and Science Policy, with the help of their colleague in the Ministry of Finance, had resolved this problem.

A stubborn problem was: Who would have the responsibility of what? That is called competence. During and after the last cabinet formation, this problem became blown up because the question of competence came to stand in the sharp, and up to the present, paralyzing light of the discussion on the so-called office of project minister. The question who that would now have to be in the area of satellite and space activities is the subject of a struggle between Minister Van Kemenade (Education and Science), who finds that research in the area of satellite and space activities is a question of more than technology for the sake of industrial development, and Terlouw (Economic Affairs), who would like very much to pursue some kind of technology policy. In circles in The Hague, it is being muttered that the bickering is almost over.

Unless the indications are deceptive, the note on satellite and space activities will thus be made public within a short time. The word public should, indeed, be put in quotation marks since everybody involved already knows its content. Already last summer, the Cabinet agreed to the content of the note. The note contains, among other things, the following points:

- An annual government expenditure of approximately 100 million guilder. That is approximately the same amount as the government, on the average, has spent on satellite and space activities during the last few years.
- For the time being, no new national (scientific) satellite as a successor to the Astronomical Dutch Satellite (the ANS) and the Infrared Astronomical Satellite (the IRAS). The latter will probably be put in orbit around the earth at the end of this year or the beginning of the following year.
- Greater efforts in a European context through more participation in projects of the European Space Agency (the ESA).

0.04 Percent

The 0.04 percent of the gross national product which the Dutch government spends on satellite and space activities is less than the average of the West European countries, which is 0.05 percent. A perhaps more important difference with our neighboring countries is that, in the implementation of the government policy as reported in the note on satellite and space activities, the ratio between national and European projects is different.

M. de Boer, an economist of the Dutch Institute of Aircraft Development and Satellite and Space Activities (the NIVR) at Delft, says on this: "The Dutch government wants an increase in the share in the European Space Agency projects, and thus fewer or even, for the time being, no new national projects. You notice, however, that the other countries which are members of the European Space Agency endeavor to achieve the opposite, viz. a ratio of one to one, thus just as much money for European Space Agency projects as for national projects. It is true that you have to take a broad view of the word 'national.' It is mostly a question of bilateral or trilateral projects. That applies also to our national satellite projects, the ANS and, in particular, to the IRAS. The Netherlands do not, for example, have launching facilities, so that we are dependent on the United States for the launching of the IRAS."

The government is no longer as interested in building national satellites, particularly not for scientific purposes, and even not if they have a certain commercial interest.

The Scientific Policy Advisory Council (the RAWB) wrote in June of 1980 that commercialization of the satellite and space activities will become a fact in the eighties, and that the financial efforts on the part of the government, therefore, may become limited. The RAWB thus did not at all consider a third national scientific satellite project. Thus, after the ANS (57 million guilder) and the IRAS (150 million guilder), no TIXTE (Timing Imaging X-Ray Transient Explorer). That is the scientific satellite which would have had to discover and examine X-ray sources in the sky. A project in which the laboratories for space research in Leiden and Utrecht were extremely interested, and for which a feasibility study had already been performed in 1980.

A course of events which Professor H. Wittenberg, engineer, of the Department of Aviation and Satellite and Space Activities Technology of the Technical University at Delft, finds incomprehensible: "The RAWB and the government reject such a scientific satellite project while, in the very area of astronomy and astrophysics, our country has the greatest scientific and technical potential."

Declining

The fact that the Ministry of Economic Affairs has a somewhat different view of matters such as these is not so strange. J. W. Hillege, engineer, deputy director-general of industry of the Ministry of Economic Affairs, does not find it very significant to build another scientific satellite. "The learning curve of the industry is declining. The role of the authorities is to render assistance in the advance investment of knowledge, to lend a hand during the steep part of the learning curve. Further, the authorities are, of course, also customers. There thus is and will, of course, be the use by the authorities (the Postal and Telecommunications Services, and the Dutch broadcasting stations) of satellites for telecommunication and broadcasting. If, however, no industry offers to build this kind of satellite in the Netherlands, the authorities will not participate any longer either." This statement asks for further elucidation of the role of Philips and its subsidiary Hollandse Signaal Apparaten, which is normally referred to as Signaal. However, Hillege does not want to make any further statements on Philips and satellite and space activities. That is a pity, for in the note is implied a reproach with reference to Philips that developments in the field of satellite communications have not really picked up. While Philips, however, has everything ready, and, in the communications market, is very active.

Too Far

Dr. i. A. J. Tindemans, head of the Department of Industrial Research of the Ministry of Education and Science, says on this subject: "Philips is much less involved in the satellite and space activities sector than Fokker, for all sorts of reasons, which, of course, reflect Philip's interests. It is not reasonable either to expect that Signaal, all of a sudden, would set up a satellite line. That would go too far. But it is a well-known fact that not everybody at Philips attaches equally great importance to satellite and space activities."

In the note on satellite and space activities, satellite telecommunication is mentioned as the most obvious example of the coming commercialization of the satellite and space activities. Tindemans: "It is a real industrial possibility, and one might assume that a big enterprise such as Philips which, in a number of areas in the telecommunications sector, holds a strong position, might become active in the entire sector. It might be able to offer a total package, varying from receiving and sender systems for the satellite to reception parabolas for ground stations."

parts

According to Tindemans, Philips is still not in favor of that and chooses to develop and supply a few parts in areas where it has a strong position. "If, indeed, Philips should choose to deliver entire systems, it would be considerably easier for the authorities to pursue a sharply focused policy in this area," Tindemans says. "Now things are somewhat more difficult. The reason why we, as public authorities, keep putting money into this area is that we see an industrial perspective in it. A greater contribution from the industry ought then to become slowly visible."

The fact that the Dutch authorities do, indeed, see a future in the field of satellite communications appears from the decision taken by the council of ministers prior to the note on satellite and space activities at the end of last year on the Dutch participation in the Large Satellite program of the European Space Agency. The Large Satellite is an example to demonstrate a new generation of telecommunication satellites. If in 1986 the satellite, with the European Ariane carrier rocket, is brought to its final destination at 36,000 kilometers above the equator, the Netherlands will have contributed approximately 135 million guilder to the costs, i.e. 11-12 percent of the total costs. The Dutch partners are the United Kingdom, Italy, Canada, Belgium, Denmark, Spain, and Austria. According to Minister Terlouw, the development and the construction of the Large Satellite provides Fokker and Hollandse Signaal Apparaten with 600 men years.

very

The absence of France and the Federal Republic of Germany in the European satellite program is striking, and significant. De Boer of the Dutch Institute for Aviation Development and Satellite and Space Activities: "In 1977 the idea was still that France and the Federal Republic of Germany would participate in the projects of the European Space Agency, and that they would take by far the greatest share in these projects. However, under pressure from their industries, which wanted an even greater share in the projects, both countries decided to build a broadcasting satellite together."

The original ideal of the European Space Agency, joint European cooperation in the area of satellite and space activities, is being threatened by the increasing possibilities of making money in this sector. It is thus expected that, in the period 1985-2000, there will be a need for approximately 150 to 200 large satellites of the Large Satellite type. The European Space Agency does not tolerate any commercialization of the satellite and space activities, and the smaller countries, such as the Netherlands, are in danger of becoming the victims of this, seeing that they alone cannot carry out any large projects and, in the market determined by politics, cannot make it on the basis of their very small, or even lacking, domestic markets. The small countries may, indeed, contribute to the development costs in the European Space Agency context, thereby distributing the initial risks, but if it becomes economically interesting, the large countries say that they prefer to do it themselves.

De Boer: "That is why we have now had included in the Large Satellite contract that, in the case of any subsequent orders, we shall still participate with the same percentage."

Reduced Level

In addition to the imminent danger of a quantitatively reduced level of the Dutch satellite and space activities, there is also the imminent danger of a reduction in quality. Wittenberg: "I doubt if it will be possible for the Netherlands in the future on the basis of the intended concentration (70 percent of the public expenditure) on ESA, and without a strong national program in respect of our own projects, to remain the same interesting partner within the ESA. There is the imminent danger that the fair return will increasingly apply to technoscientific work of a lower level." De Boer: "You are allowed to participate in the talks within the ESA if you contribute money and technology. The latter you can only develop through national programs. Other countries do that too."

Finally Wittenberg: "If our country fails to invest to a sufficient degree in national and international satellite and space activities programs, and it is decided, in the future, to concentrate solely on ESA as the chief objective, our country will, no doubt, gradually lose the position it has acquired in the area of space research and space technology."

7262

CSO: 5500/2169

NETHERLANDS

NEW PUBLIC COMPUTER COMMUNICATIONS NETWORK

Amsterdam DE TELEGRAAF in Dutch 5 Mar 82 p 29

[Text] The Netherlands has as of today a public computer communications network. This network has been set up specially by the Postal and Telecommunications Services to effect fast and practical communication among different kinds of computers.

At a meeting in The Hague, Parliamentary Undersecretary for Transport and Waterways, J. van der Doef, opened the public computer communications network I of the Postal and Telecommunications Services.

According to him, a qualitatively excellent and flexible "network for communication among computers" will hereby become available to industry. The parliamentary undersecretary, moreover, stressed the international nature of the public computer communications network I. The idea is that all public computer communications networks in Europe will, before long, become interconnected.

The computer communications network is a logical successor to the telephone and the telex systems. "Also users with a relatively small need for communication will now get the possibility, at an early stage, of having the disposal of an extended network. C. Wit, engineer, chief director of the Telecommunications Department of the Postal and Telecommunications Services, envisages, in the future, a coupling among all kinds of networks, for example, from video-phones at subscribers starting in the telephone network and, subsequently, via the computer communications network to a computer; or telex communication, via telex as well as via computer communications networks.

The Postal and Telecommunications Services expect, in the course of the next 2 years, to connect 5,000 terminals to the new public computer communications network. In order to achieve the highest possible level of good and reliable communication, a technique has been chosen according to which the information is split into equal packages. In special exchanges, these are held briefly, sorted out, and then sent on to their destinations, as if it were a question of freight cars. This goes

so quickly that it seems as if the subscribers are in uninterrupted contact with one another. An important feature is the absence of disturbances. When computers are connected with one another via telephone lines, the chance of disturbances is great. Telephone lines were, after all, not developed for this.

Also the tariffs are based on the number of information packages. Duration and distance, as in the case of telephone tariffs, are not important.

According to A. O. Schaap, engineer, director of ITT Standard Electric, the Postal and Telecommunications Services now have at their disposal the most modern network in the world. The techniques involved have been developed in close cooperation with the Postal and Telecommunications Services and a Belgian ITT enterprise in the Netherlands. A. O. Schaap talked about a unique development. "Technically, this is just as difficult as the development of a new large computer. This is an indication that the telecommunications industry in the Benelux countries can handle even the most advanced projects," A. O. Schaap said.

The computer communications network is composed of sixty satellite exchanges and three communications exchanges. These exchanges--and thus the intelligence of the network--are spread throughout the country. According to A. O. Schaap, the latest inventions in the technical area have been incorporated into this computer communications network. The present set-up offers sufficient capacity for 20,000 subscribers. Expansion of this capacity is easy since the system is very flexible. At the Postal and Telecommunications Services it is thus stated with pride: the computer communications network I now really puts life into the computer.

7262

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EXPERIMENTAL TWO-WAY CABLE TV PLANNED IN LIMBURG

Rotterdam NRC HANDELSBLAD in Dutch 16 Mar 82 p 2

[Text] The government allows Limburg to experiment with new services in connection with a two-way cable TV network but, for the time being, not with paid television. The cabinet decided last week to support the Limburg experiment with approximately 10 million guilder.

It is a question of a two-way cable TV network which will be built in Maastricht, Heerlen, Kerkrade, Sittard, Valkenburg and Beek, with a total of 90,000 connections. "By far the biggest two-way cable TV experiment in the world," F. Rondagh, economist, the information policy man of Minister J. Terlouw of the Ministry of Economic Affairs, establishes. Philips will next month start on the construction of the network in Maastricht.

All kinds of tests with vacancy banks, freight data, hotel bookings, and tele-text information can be performed on the Limburg cable network. A particular feature is that the viewer can also call up information via his set, something which till now could only be done via telephone (for example, video telephone). At an advanced state, a viewer may also via his set pass on an opinion such as yes or no to the exchange.

Minister Andre van der Louw (Cultural, Recreational, and Social Affairs) has, till the end, strongly opposed broadcasting experiments on the Limburg network. He has insisted that for such experiments, a new cabinet decision is necessary. Van der Louw wants to base his broadcasting policy on a new media note which he will not submit to Parliament until the summer. Before that time, he rejects experiments with, for example, paid TV, a special channel with films, shows, etc. to which the viewer may subscribe specially.

The fact that the cabinet decision, nevertheless, was made may be seen as a victory to Minister J. Terlouw, who sees the new services as a potential source of employment and export. Rondagh: "A big experiment such as the one in Limburg gives all kinds of new developments and products which may be used elsewhere."

Philips, which is building the network in Limburg, does not have the disposal of the selector matrices which, as small telephone exchanges, can select and send on the different orders from viewer to supplier. Delta-kabel at Gouda and Robert Schmitz at Zaltbommel have developed such equipment. The Postal and Telecommunications Services still have to decide which one may be used in the Dutch network.

The South-Dutch municipality of Puttershoek has asked the Ministry of Economic Affairs to finance three experiments on the local cable TV network. It is a question of alarm systems for senior citizens, burglary and fire alarm systems. These are just simple services which may also be provided by the Postal and Telecommunications Services via a telephone line. The ministry will examine whether these experiments are sufficiently innovative to warrant subsidization.

7262

CSO: 5500/2166

NORWAY

BRIEFS

AGENCY TO START POSTFAX SERVICE--"During the second half of this year the Telecommunications Administration and the Post Office will jointly introduce a new communications service called Postfax. It is a service intended for people who might have a need for sending or receiving facsimiles but do not themselves have the necessary equipment. It involves a two-year test period in order to clarify the demand. For the time being the service will only be offered inside the country. Later on it may be of interest to offer communication also between Norway and other countries," information manager Christian Bugge Hjorth in the Telecommunications Administration informs AFTENPOSTEN. The Post Office intends to establish Postfax service offices at a few places in Oslo and in Bergen, Trondheim, Gjøvik, Skien, Kristiansand, Kristiansund, Narvik and Tromsø. The Telecommunications Administration plans service offices in Oslo, Bergen, Trondheim, Hamar, Drammen, Stavanger, Ålesund, Bodø, Harstad, Hammerfest, and Vadsø. The public will be able to deliver documents to be transmitted at a service office and have them transmitted in facsimile to the service office located closest to the addressee. Persons who themselves have equipment will be able to send facsimiles to the service office located closest to the addressee and get them delivered further from that office. It is the Post Office's express service which will be responsible for the delivery. A third possibility is that the addressee himself will pick up the facsimiles at the service office. "So far no decision has been made on the rates for this service. This is a question which the Post Office and the Telecommunications Administration will discuss further," says Bugge Hjorth. [Text] [Oslo AFTENPOSTEN in Norwegian 23 Mar 82 p 35] 8958

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